

Audit

Report



OFFICE OF THE INSPECTOR GENERAL

**FUNDING OF THE NATIONWIDE EMERGENCY
TELECOMMUNICATIONS SERVICE**

Report Number 92-059

March 10, 1992

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The following acronyms are used in this report:

AT&T.....	American Telephone and Telegraph Company
DFARS.....	Defense Federal Acquisition Regulation Supplement
DISA.....	Defense Information Systems Agency
FAR.....	Federal Acquisition Regulation
inter-LATA.....	inter-Local Access Transport Area
MIL-STD.....	Military Standard
NCS.....	National Communications System
NETS.....	Nationwide Emergency Telecommunications Service
NLP.....	National-Level Program
NSDD.....	National Security Decision Directive
NS/EP.....	National Security Emergency Preparedness
NSTS.....	NETS Software Tools System
O&M.....	Operation and Maintenance Appropriation
OMNCS.....	Office of the Manager, National Communications System
PCC.....	Policy Coordinating Committee
PSN.....	Public Switched Network
RBOC.....	Regional Bell Operating Companies
RDT&E.....	Research, Development, Test, and Evaluation
RNHR.....	Robust Non-Hierarchical Routing
SETA.....	Systems Engineering and Technical Assistance
SIM.....	Switch Internal Module
SSN.....	Survivable Signaling Network



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

March 10, 1992

MEMORANDUM FOR DIRECTOR, DEFENSE INFORMATION SYSTEMS AGENCY

SUBJECT: Audit Report on the Funding of the Nationwide Emergency Telecommunications Service (Report No. 92-059)

We are providing this final report for your review and comments. This report addresses the funding aspects of the Nationwide Emergency Telecommunications Service (NETS). Matters concerning impediments to and requirements for the NETS are being addressed in a separate classified report.

The Director, DISA, nonconcurred with the finding and recommendations in a draft of this report that was issued on July 5, 1991. The comments provided by the Director were extensive and included information that clarified the efforts accomplished through the contracts reviewed. Based on the new information we determined that \$124 million, rather than \$34 million, of the \$183 million we reviewed was properly funded. However, \$59 million, or almost one-third of the work undertaken, was for design or development and not funded in accordance with the DoD Budget Manual. Therefore, we maintain that a need still exists to correct the funding practices at DISA by implementing the recommendations in this report, which will result in compliance with the basic intent of the Manual regarding the differentiation of RDT&E and O&M funded efforts.

In addition, we have substantially expanded the presentation in Other Matters of Interest, Part I; Discussion of Details, Part II; and Appendix A in Part III, to reflect the comments provided on the draft report. A Management Comment and Audit Response section was also added in Part II of the report. It is requested that you reconsider your position on the finding and recommendations in view of these revisions, and provide comments on this final report. Your comments should be provided by May 11, 1992.

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. The Status of Recommendations section at the end of Part II identifies the specific requirements for your comments on this final report. Recommendations are subject to mediation in accordance with DoD Directive 7650.3 in the event of nonconcurrence or failure to comment.

The courtesies extended to the audit staff are appreciated. If you have any questions on this audit, please contact Mr. John A. Gannon at (703) 693-0163 (DSN 223-0163) or Mr. Charles M. Hanshaw at (703) 693-0115 (DSN 223-0115). The distribution of this report is listed in Appendix E.



Robert J. Lieberman
Assistant Inspector General
for Auditing

cc:
Assistant Secretary of Defense (Command, Control,
Communications and Intelligence)
Office of the Deputy Manager, National
Communications System

Office of the Inspector General, DoD

AUDIT REPORT NO. 92-059
(PROJECT NO. ORD-5016.02)

March 10, 1992

FUNDING OF THE NATIONWIDE EMERGENCY
TELECOMMUNICATIONS SERVICE

EXECUTIVE SUMMARY

Introduction. The Nationwide Emergency Telecommunications Service (NETS) is part of a national-level program to provide survivable telecommunications support for national security leadership in major disasters, including nuclear attack. National Security Decision Directive (NSDD) 201 requires DoD to finance all of the NETS development costs. It also requires the DoD and 22 other Government agencies to finance the implementation and recurring costs of the NETS, based on an allocation method prescribed in NSDD 201. From FY 1982 through FY 1990, DoD financed development costs totaling \$94.6 million and \$3.3 million of the total \$4.8 million for implementation and recurring costs.

Objectives. Specific audit objectives addressed in this report included determining:

- the propriety of the choice of appropriated funds used to finance NETS efforts;
- whether the level of reimbursement to DoD by other Government agencies participating in the NETS program conformed to NSDD 201; and
- the adequacy of corrective actions taken to implement recommendations made on funding issues in IG, DoD, Audit Report No. 86-038, "Procurement Functions and Contracts at the Defense Communications Agency," November 7, 1985.

A separate, classified audit report, "Impediments to and Requirements for the Nationwide Emergency Telecommunications Service" (Project No. ORD-5016.02), will address the remaining audit objectives of the overall project, No. ORD-5016, "Audit of the Nationwide Emergency Telecommunications Service."

Audit Results. The audit showed that the level of reimbursement to DoD by other Government agencies participating in the NETS program was in accordance with NSDD 201. It also showed that the Defense Information Systems Agency (DISA) routinely used operation and maintenance (O&M) funds appropriated for National Communications System (NCS) operations to finance research and

development efforts in the NETS program. Our review of 13 contracts, totaling about \$183 million and awarded during FY 1986 through FY 1990, disclosed that efforts, totaling about \$59 million in 10 of 13 contracts, should have been budgeted and funded in the Research, Development, Test, and Evaluation (RDT&E) appropriation. Unless the funding practices are corrected, DISA will have expended O&M funds totaling about \$160 million for RDT&E efforts over 14 years, from the inception of the NETS program in FY 1982, until its initial operating capability, slated for FY 1996.

Internal Controls. We evaluated the internal controls over the contracting for and funding of the NETS and determined that there were no material deficiencies.

Potential Benefits of Audit. Implementing the recommendations will result in the proper differentiation of RDT&E versus O&M efforts in compliance with the DoD Budget Guidance Manual on preparing and executing budgets and will correct the misuse of the O&M appropriation to fund RDT&E efforts (see Appendix C).

Summary of Recommendations. We recommended that the Director, Defense Information Systems Agency, discontinue the practice of routinely using the O&M appropriation to finance up-front development costs in the NETS program. We also recommended that the Director clarify budget submissions by including sufficient details on telecommunications systems and services being funded from the NCS portion of the O&M appropriation so that development and testing activities can be differentiated from leasing and operating activities.

Management Comments. The DISA disagreed with the finding and recommendations. The DISA stated that the IG's conclusions are based on a misinterpretation of the DoD Budget Guidance Manual, chapter 251.5.M, to the exclusion of all other provisions on RDT&E. DISA's responses are further discussed in Part II of the report. A complete text of management's comments is in Part IV of the report.

The Office of the Comptroller of the Department of Defense, commented on the draft report that the NETS contracts are fundamentally telecommunication services contracts. Therefore, DISA's decision to use O&M funding is a reasonable interpretation of the Budget Guidance Manual. The comments are further discussed in Part II of the report, and a complete text of the comments is in Part IV.

Since we maintain our position on the funding issues, we request that the Director, Defense Information Systems Agency, provide comments on this final report by May 11, 1992.

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This report was prepared by the Readiness and Operational Support Directorate, Office of the Assistant Inspector General for Auditing, DoD. Copies of the report can be obtained from the Information Officer, Audit Planning and Technical Support Directorate (703) 693-0340 (DSN 223-0340).

PART I - INTRODUCTION

Background

The National Communications System (NCS) is a confederation of 23 Government agencies responsible for assisting the President, the National Security Council, the Office of Science and Technology Policy, and the Office of Management and Budget in exercising wartime and peacetime telecommunications functions. Executive Order 12472, dated April 3, 1984, designated the Secretary of Defense as the Executive Agent of the NCS. The NCS is collocated with the Defense Information Systems Agency (DISA), (formerly the Defense Communications Agency), and the Director, DISA, serves as Manager of NCS. Budgeting, contracting, and administrative support services are provided through DISA. Appropriations for operating the NCS and for developing national telecommunications capabilities and services are financed from the DISA portion of the Operation and Maintenance (O&M) appropriation. DISA funded the development and operation costs in the O&M budget line item identified as "NCS Operations."

Since FY 1982, a major effort has been under way by the NCS to provide a telecommunications infrastructure that would withstand natural and man-made disasters, including nuclear attack, to fulfill requirements under National Security Decision Directive (NSDD) 97, dated August 3, 1983. The infrastructure was required to support national security leadership requirements, including the ability to gather intelligence and conduct diplomacy; to ensure continuity of command and control of military forces; and to provide for continuity of the Government and its essential functions. The Nationwide Emergency Telecommunications Service (NETS) is under development in response to those requirements. Under NSDD 201, December 17, 1985, DoD was required to bear all costs associated with the development of NETS and an allocated portion of associated implementation and recurring costs. From FY 1982 through FY 1990, development costs totaled \$94.6 million, and DoD's allocated portion of implementation and recurring costs totaled \$3.3 million. Costs allocated to other Government agencies during that time totaled \$1.5 million.

The NETS is to be imbedded in the telecommunications industry's enhanced public switched network (PSN), with features to be designed to provide authorized users ubiquitous, survivable, telephone service during periods of national security crises, including nuclear attack.

Objectives

The basic objective for the overall audit (Project No. ORD-5016) was to determine if the development and acquisition of the NETS

is being managed effectively and efficiently. Because of the complexity and variation of the issues pertaining to NETS that this audit addressed, the objectives were divided into two segments and are being reported separately. Specific audit objectives for this segment of the audit included determining:

- the propriety of the choice of appropriated funds used to finance NETS efforts;
- whether the level of reimbursement to DoD by other Government agencies participating in the NETS program is proper;
- the adequacy of corrective actions taken to implement recommendations made on funding issues in Inspector General, DoD, Audit Report No. 86-038, "Procurement Functions and Contracts of the Defense Communications Agency," November 7, 1985; and
- the adequacy of applicable internal controls.

We found no problems in reimbursement to DoD. The audit showed that the level of reimbursement to DoD by other Government agencies participating in the NETS program was in accordance with NSDD 201.

A separate, classified audit report will be issued on the requirements segment (Project No. ORD-5016.03) of the audit.

Scope

The audit included reviews of work on all 13 NETS program contracts, totaling about \$183 million, undertaken from FY 1986 through FY 1990. We evaluated the nature of efforts required by the contracts, contracting and funding measures, and the level of reimbursement to DoD by other Government agencies participating in the NETS program from FY 1988 to FY 1990. This economy and efficiency audit was made from August 1990 through March 1991 in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD, and accordingly, included such tests of internal controls as were considered necessary. Activities visited or contacted during the audit are listed in Appendix D.

Internal Controls

The Federal Managers' Financial Integrity Act of 1982 and Office of Management and Budget Circular A-123 require each Government agency to establish a program to identify significant internal control weaknesses. DISA Instruction 630-125-6, "Internal Management Control Program," July 23, 1987, contains policies and procedures for the DISA's internal control program. We reviewed

the implementation of the Federal Managers' Financial Integrity Act as it related to our audit scope and evaluated internal controls over contracting for and funding of the NETS. Internal controls were deemed to be effective in that no material internal control deficiencies were disclosed by the audit.

Prior Audits and Other Reviews

Inspector General, DoD, Audit Report No. 86-038, "Audit of Procurement Functions and Contracts at the Defense Communications Agency," November 7, 1985, reported on the propriety of financing certain developmental efforts for enhancing the survivability of the national telecommunications network with O&M funds instead of Research, Development, Test, and Evaluation (RDT&E) funds. The report concluded that from FY 1982 through FY 1984, the DISA had used O&M funds totaling \$18.8 million for network design studies, system engineering studies, and the development of experimental hardware and software needed for concept validation. The report recommended that O&M funds be "backed out" and that those efforts be charged to the RDT&E accounts.

The DISA nonconcurred and stated that the use of O&M funding was correct, because the work had "transitioned via OSD budgeting from RDT&E to O&M during fiscal years 1982, 1983, and 1984." The DISA also stated that its position conformed to applicable statutes. In the resolution of the finding and recommendation, the then Deputy Assistant Secretary of Defense (Program/Budget) determined that the DISA funding actions were questionable and that the efforts in question may have been more appropriately funded in the RDT&E appropriation. As a result of the resolution agreement, the Comptroller of the Department of Defense revised the DoD Budget Guidance Manual (Budget Manual), July 24, 1987. The revised Budget Manual clarified that up-front costs for design or development of major changes or improvements to a leased service, to meet the Government's requirement, are to be budgeted and funded in the RDT&E appropriation.

Other Matters of Interest

In the early stages of this audit, we became aware of the imminent award of an integration contract (Request For Proposal No. 200-89-R-0033) to define, engineer, plan, integrate, implement, operate, and maintain NETS. The contract was planned for award in December 1990, with a performance period of 10 years, at an estimated cost of \$500 million. Our initial review of the proposed contract requirements and the status of certain functional, survivable, and military application aspects of NETS raised a concern that the award of the contract may be premature. In conjunction with the Inspectors General of the Department of Transportation and the Federal Emergency Management Agency we pursued that concern.

On September 11, 1990, an alert memorandum was issued to the Secretary of Defense on the potential premature award. On October 8, 1990, the Assistant to the President for National Security Affairs determined that the integration contract should not be awarded until the Policy Coordinating Committee (PCC) for the National Security Telecommunications and Information Security completed a review of certain NETS aspects. Upon completion of the review, the Chairman of the PCC informed the Assistant to the President for National Security Affairs on January 15, 1991, of the PCC conclusion on the integration contract award. The Assistant to the President for National Security Affairs approved a 2-year delay in contract award in a memorandum, February 28, 1991, to the Secretary of Defense, the Executive Agent of the NCS.

Our review of processes leading to the planned award of the integration contract disclosed some practices in contract funding and authority that management should correct during the integration contract deferral period.

Contact funding. The integration contract called for performance in 3 phases over 10 years, financed from the single-year O&M appropriation. This performance effort was geared totally toward providing survivable, interoperable telecommunications service that would meet the Government's requirements for communicating in major disasters on matters associated with national security. This communications service does not exist at present and will not be operational until the initial operating capability is developed and demonstrated. Planning calls for initial operating capability in FY 1996. To achieve that objective, RDT&E efforts and major changes and enhancements to the PSN were required.

Phase I contract efforts. Phase I of the request for proposal, which covered the first 5 years of the integration contract, encompassed the performance of a significant amount of research, design, development, test, and studies on the supporting software and hardware modifications, route selection algorithms, etc. Those efforts played a vital part in advancing the existing state of telecommunications technology and in providing major changes to the PSN, specifically, to meet the Government's requirements. Chapter 251.5.M of the Budget Manual requires that up-front funding to design or develop such major changes or improvements to meet the Government's requirements are to be budgeted and funded in the RDT&E appropriation.

Other guidance relating to RDT&E. The Budget Manual and provisions in the Federal Acquisition Regulation (FAR) and Defense Federal Acquisition Regulation Supplement (DFARS) related to RDT&E do not define terms such as "major changes or

improvements," as stipulated in chapter 251.5.M, and do not specify tests required in making such determinations. However, similar terms discussed in paragraph 5.1.2 of Military Standard (MIL-STD) 480B, "Military Standard Configuration Control-Engineering Changes, Deviations and Waivers," July 1988, have a relative application. Paragraph 5.1.2 provides a discussion of criteria for determining which engineering changes should be Class I, versus Class II. Class I changes are: "those which are necessary or offer significant benefit to the Government." In the context of MIL-STD-480B criteria, the question of whether the NETS contract program is necessary and will make a "significant" effectiveness change in operational or logistical support requirements can be determined only by definition of the terms "significant" and "major." Paragraph 5.1.a. of MIL-STD-480B provides a list of criteria that determine an engineering change Class I versus an engineering change Class II. The first criterion is the affect on reliability, maintainability, or survivability. Survivability is the intended key state-of-the-art feature of NETS.

Further evidence of RDT&E efforts. The list of major milestones, on page C-6 of Amendment 0011 of the proposed contract, and the proposed contract data requirements list described several deliverables normally required during either the Demonstration-Validation or the Full-Scale Development phases of a program (now called the Engineering and Manufacturing Development phases in DoD Instruction 5000.2 and DoD Manual 5000.2-M). For example, Preliminary Design Reviews and Critical Design Reviews, as defined in MIL-STD-1521B, normally take place during either the Demonstration-Validation phase or the beginning of the Engineering-Manufacturing phase. The cost of the design reviews are generally budgeted and funded in the RDT&E appropriation. Those reviews and the draft and final Master Operation and Maintenance Plan, and the Five-Year Service Plan, required by the request for proposal, are all examples of a program that is under development.

In view of the deferral of the integration contract, and based on the factors discussed above, an opportunity exists to reexamine the funding strategy for NETS. Consideration should be given to funding Phase I of the proposed contract with RDT&E money for periods up to 5 years. Then, a separate competitive contract for procurement of call controllers, access security devices, and other hardware and software can be funded with procurement money. Finally, a separate competitive contract for the operation and maintenance of NETS could be funded from the O&M appropriation. The deferral also presents an opportunity for DISA to present the NETS program to Congress for a more specific grant of authority with regard to the funding and allowable term for the 10-year contract.

Contract authority. The proposed integration contract was not within the statutory authority granted to the General Services Administration to contract up to 10 years for public utility services. In support of the 10-year strategy, DISA officials cited DFARS section 237.7406. That provision is based on U.S.C., title 40, section 481(a)(3), which authorizes the General Services Administration to contract for communications services extending beyond the fiscal year, but not longer than 10 years when, among other circumstances, the Government obtains lower rates, larger discounts, or more favorable conditions of service than those available under a contract for a definite term not extending beyond the current fiscal year.

The statutory grant of authority to the Administrator of the General Services Administration was not made to fund the development, implementation, and integration of improvements in or enhancements to a public utility. The grant of authority was made so that the Government could obtain lower rates, longer discounts, or more favorable conditions of service. These benefits would not result from the proposed integration contract. Accordingly, the proposed integration contract was not within the authority delegated by the General Services Administration to contract for public utility services for periods up to 10 years, because the integration contract was not for the lease of a present public utility service. Rather, it was for the design, development, and implementation of a new, enhanced, survivable, interoperable telecommunications service capability vital to national security leadership during and after a major disaster, including nuclear attack. This service is not presently available, and will not be available until after its development is completed and its initial operating capability is demonstrated. As previously discussed, the service is not contemplated until at least FY 1996.

If the NETS is implemented into the PSN, it will significantly expand the current state of telecommunications technology and will require major changes and improvements to the PSN to meet the Government's requirements. Such efforts are not within the purview of the statutory grant of authority provisions.

Similar issues associated with the funding of past and present contracts in the NETS program are addressed in the finding discussion and recommendations in Part II of this report. However, since the award of the proposed integration contract has been deferred, no recommendations are made on contract funding and authority issues associated with the deferred contract. In our opinion, however, these problems need to be brought to the attention of DISA and the Office of Manager, National Communications System (OMNCS), because the contract deferral period provides an excellent window of opportunity to rectify those problems and preclude their recurrence after contract award.

PART II - FINDING AND RECOMMENDATIONS

CONTRACT FUNDING

DISA routinely used O&M funds, appropriated for NCS organizational operating costs, instead of RDT&E funds, to finance significant RDT&E efforts in the NETS program, despite past attempts to stop that funding practice. This condition occurred primarily because DISA did not comply with budgeting and funding provisions in differentiating O&M efforts from RDT&E efforts, including a provision enacted specifically as a result of similar, past funding practices in the NETS program. Unless DISA changes those funding practices, it will continue to violate the provisions governing the obligation and expenditure of O&M and RDT&E appropriations, and the DoD will be constrained in its oversight of DoD funds used for RDT&E efforts involved in the development and implementation of national-level telecommunications systems and services.

DISCUSSION OF DETAILS

Background

DoD funding policy. The Budget Manual requires that goods and services for operating and maintaining DoD activities are to be funded from the O&M appropriation. Examples of expenditures that are proper under the O&M appropriation are pay of civilians, maintenance and repair of facilities and weapon systems, fuel supplies, services, repair parts, training, health care, education, and other goods and services required for operating and maintaining the Armed Forces and military organizations. The Budget Manual also requires that funds for RDT&E efforts are to be funded from the RDT&E appropriation. The Budget Manual provides clear definitions of RDT&E elements and stipulates that when a leased service requires up-front funds for design or development of major changes or improvements to meet the Government's requirement, RDT&E funds are to be used.

In 10 of the 13 contractual efforts associated with the NETS included in our review, DISA routinely used O&M funds for RDT&E work, despite past efforts of the IG, DoD, and the Comptroller of the Department of Defense to stop this improper funding practice. Appendix A contains the details of each contract analyzed in reaching our conclusions on the funding practice. Improper funding practices were previously reported to DISA in Audit Report No. 86-038, November 7, 1985. At the conclusion of the audit mediation process on that report (see the Resolution Agreement in Appendix B), the Comptroller of the Department of Defense made significant revisions to the Budget Manual to preclude the recurrence of this problem and directed that DISA

comply with the Budget Manual. The revisions included the addition of chapter 251.5.M to the Budget Manual in FY 1987, which provided further clarification on budgeting and funding of up-front development costs to change or improve an existing service to meet Government requirements. Chapter 251.5.M, "Development Efforts Related to Future Leased Services," provides guidance for the preparation, justification, and execution of budget requirements within the DoD. The chapter states:

When the ultimate product to be secured by the Government is a leased service to be budgeted and funded in an Operation and Maintenance appropriation, and the provider of that service requires up-front funding in order to design or develop major changes or improvements to meet the Government's requirement, then the costs of such development efforts will be [emphasis added] budgeted and funded in the RDT&E appropriation.

Chapter 251.3 of the Budget Manual emphasizes that all RDT&E-related efforts should be funded in the RDT&E appropriation so that OSD can assess research and development programs from a priority standpoint with other similar programs. Although careful consideration of the nature of contractual efforts to be financed is required in reaching funding determinations, the provisions of the FAR, DFARS, DISA circulars, NCS directives, and the Budget Manual provide preponderant guidance on what constitutes RDT&E and O&M. Additionally, the Budget Manual stipulates that when there is doubt about the proper assignment of costs between appropriations, RDT&E funding should be used. The guidance is clear on the nature of RDT&E efforts.

Contract Efforts

Design and development efforts. For our review of RDT&E work in the NETS program, we evaluated 13 contractual efforts that consisted of 10 contracts, 2 task orders, 1 purchase request, and 104 contract modifications, totaling about \$183 million, undertaken from FY 1986 through FY 1990. As the details in Appendix A show, work on 3 of the 10 contracts and a portion of a fourth and fifth contract, totaling over \$124 million, was properly funded from the O&M appropriation, in accordance with the Budget Manual. But work on the remaining contracts, totaling about \$59 million, was for design and development that, according to the Budget Manual, should have been budgeted and funded in the RDT&E appropriation.

RDT&E efforts budgeted and funded in the O&M appropriation. One of the contracts reviewed, DCA 200-90-C-0011, provided an example of RDT&E efforts inappropriately funded in the O&M

appropriation. The contract, totaling over \$105 million, was awarded December 26, 1989, to obtain a survivable, common-channel signaling capability within the American Telephone and Telegraph Company's (AT&T) 4ESS Switch Network in support of the NETS program. The contract was for design, development, test implementation, and lease as a tariffed service. In an internal document, dated May 22, 1988, the then DISA Associate Deputy Director for Planning, Programming, and Budgeting recognized that O&M funds were inappropriate for this contract. In that document, the Associate Deputy Director pointed out that the statement of work, as written, appeared to be a major research and development effort, and that the 1987 DoD Budget Manual guidance appeared to require funding from the RDT&E appropriation, because there were major design and development changes necessary to meet the Government's requirement. The document contained a comment that the statement of work should be rewritten to specify "that only minor changes or improvements are required." It is our opinion that changes or improvements contracted at a cost of \$14.8 million are not minor, especially during this period of declining DoD budgets. Although some insignificant revisions were made to the statement of work, the scope of work remained unchanged. This document followed a similar internal document, dated May 29, 1986, which contained a summary of a discussion on DISA's attempt to justify the use of O&M funding for NETS development. One position discussed in that document was to argue that NETS is a tariffed service from AT&T. Another position was that NETS development should be treated similar to ADP software development.

Continued use of O&M funds. We discussed the acquisition strategy with OMNCS officials, contracting officers, financial managers, and DISA Comptroller personnel, to determine why O&M funds were still being used to procure NETS. We were told that a decision was made at the outset of work on NETS to fund all the efforts from the O&M appropriation because NETS is being acquired as a leased service from the communications industry, is based on available technology, and related components are off-the-shelf items. Therefore, O&M funds have been deemed proper for funding those obligations. DISA Comptroller personnel also stated they viewed the DoD Comptroller's agreement in 1986 that some of the NETS efforts "may have been more appropriately funded through RDT&E" as ambiguous, and noted that no other instruction was given for DISA to change its funding practice. As a result, the DISA considered its funding practices to be proper. We asked for an analysis or other documentation to support the OMNCS and DISA management's contention that an existing service was being leased and that the use of O&M funds was justified. No such documentation or other support was provided. Our review disclosed that NETS has been under evolutionary development since FY 1982 and cannot be leased until sometime after initial

operating capability is established. Under present OMNCS plans, the initial operating capability is not slated for implementation until FY 1996.

The Institute for Defense Analyses (the Institute) took note of the NETS program funding practice as well. In a report entitled "Nationwide Emergency Telecommunications Service Risk Assessment and Cost-Benefit Analysis," December 1988, the Institute stated that there is no differentiation as to the appropriation account used to fund the National-Level Program (NLP). The Institute's report also contained a comment that virtually all of the DoD money in the NLP happens to be provided through the O&M appropriation account regardless of its ultimate use, whether it is for research and development, procurement of equipment and facilities, or operation and maintenance.

In our discussions with representatives of the DoD, DISA, NCS, Office of Management and Budget, and the National Security Council, it was noted that NETS is viewed as vital to the national security for initiatives such as the continuity of Government in catastrophic disasters. The capability for survivable, interoperable telecommunications service, such as NETS is to provide, does not presently exist. In developing and implementing NETS, the OMNCS is advancing the current state of available telecommunications technology and providing state-of-the-art enhancements to the PSN. Although efforts on contracts totaling over \$124 million during the period audited were properly funded from the O&M appropriation, the overall efforts in the NETS program, from inception in FY 1982 to the present, have been comprised chiefly of developing the evolutionary telecommunications service and have been primarily for RDT&E efforts, including prototype equipment, such as access security devices and automatic call controllers. The Budget Manual requires that the costs associated with such RDT&E efforts are to be budgeted and funded in the RDT&E appropriation.

To provide more effective oversight of DISA budget submissions and to ensure that proper appropriations are requested for the NETS and similar programs in the future, it is our opinion that DISA should properly differentiate between RDT&E efforts versus O&M efforts, and submit and execute budgets in accordance with the provisions of the Budget Manual. Additionally, the Comptroller of the Department of Defense should closely review DISA budget requests for NCS operations to ensure that the provisions of the Budget Manual are complied with.

RECOMMENDATIONS FOR CORRECTIVE ACTION

We recommend that the Director, Defense Information Systems Agency:

1. Discontinue the practice of routinely using the Operation and Maintenance appropriation to finance development costs in the Nationwide Emergency Telecommunications Service program.

2. Clarify budget submissions by including sufficient details on telecommunications systems and services being funded from the National Communications System portion of the Operation and Maintenance appropriation so that developmental and testing activities can be differentiated from leasing and operating activities.

MANAGEMENT COMMENTS AND AUDIT RESPONSE

Management disagreed with the finding and recommendations; however, it did not specifically respond to each recommendation. DISA's comments on issues in the report and our audit responses are discussed below. A complete text of management's comments is in Part IV.

Management comments. DISA asserted that the finding, recommendations, and conclusions discussed in the draft audit report were distorted and were based on the auditors' misrepresentation of the DoD Budget Manual chapter 251.5.M and a very strict, incorrect reading of that particular section of the Budget Manual in narrowly defining the proper use of RDT&E and O&M appropriations as related to telecommunications leased services.

Audit response. We did rely partially on the provisions of chapter 251.5.M. in performing our analyses, since those provisions were enacted specifically to stop improper funding practices, discovered in our prior audit, in the NETS program. However, before reaching our determinations that the funding practices were improper, we also applied the provisions in the FAR, DFARS, Budget Manual, DISA circulars, and OMNCS directives and periodicals in our analyses of contracts in the NETS program that had been active since the prior audit. Those provisions stipulate what efforts constitute RDT&E and which appropriation should be used in funding contracts containing RDT&E elements.

The provisions are clear that "research" includes all efforts of scientific study and experimentation directed toward increasing knowledge and understanding in the physical, engineering, and life sciences related to long-term national security needs. The provisions are also clear that "development" includes the systematic use of the knowledge and understanding gained from research for the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes. Chapter 251.2 of the Budget Manual

stresses that "research and development" is intended broadly to include work performed by a Government agency or by private individuals or organizations under contractual or grant arrangement with the Government and is included in all fields of technology such as physical sciences, engineering, etc.

The DoD has clearly stated, in chapter 251.3 of the Budget Manual, that the cost coverage of RDT&E will be based on the principle that all RDT&E-related efforts should be funded in the RDT&E appropriation so that RDT&E programs can be assessed from a priority standpoint with other similar programs. DoD policy stresses that when, after consideration of the Budget Manual criteria, there is doubt concerning the proper assignment of costs between appropriations, managers should resolve the issue in favor of using RDT&E funding.

Definitions and discussions of RDT&E in DISA Circular 400-50-1 and in NCS Directive 2-2 and other OMNCS documentation showed that the DISA and the OMNCS had a clear understanding of the elements of RDT&E. The definitions used in those provisions were very similar to those in the FAR, DFARS, and the Budget Manual. For example, NCS Directive 2-2 defines "development" to include "those costs (e.g., research, pre-production engineering, proof of concept studies and demonstrations, and specification development) incurred prior to contract award leading to an operational capability." Further, in periodicals, such as annual reports on the national-level National Security Emergency Preparedness (NS/EP) telecommunications program, the OMNCS described the status of RDT&E efforts under way. Those periodicals left no doubt that the efforts described were clearly RDT&E. The OMNCS addressed many of the efforts under RDT&E captions and headings. However, when the funding of those efforts from the O&M appropriation was discussed, the OMNCS steadfastly denied that any of the efforts in the NETS program were RDT&E.

Before reaching our final determination on the improper funding practices, we obtained analyses of the contract data from the engineering staff of our Technical Assessment Division. Their analyses supported our conclusions that NETS program contracts contained RDT&E efforts that should have been funded from the RDT&E appropriation.

Management comments. The DISA Comptroller, in conjunction with the Acquisition Management Directorate and the OMNCS, thoroughly reviewed the NETS contracts in question and concluded that O&M funds were properly used in the past and are prospect for future financing of NETS contractual efforts. DISA provided a synopsis of each contract reviewed as an enclosure to its response to the draft audit report (see Part IV). DISA's summary

comment was that the majority of the contractual efforts in question involve data collection, minor software and some hardware modifications to existing systems, and analysis of current network design and configuration to determine the NETS ability to meet NS/EP requirements, program assessment, technical and acquisition evaluation support, and routine engineering support and services.

DISA concluded that none of the efforts in question meets the research and development test of expanding the current state of technology or of providing major or significant software or hardware changes to an existing system. DISA explained that it was merely leasing an existing service and using off-the-shelf components, rather than developing a new telecommunication service. Additionally, DISA commented that there had been no development in past NETS program efforts and that none was planned for the future.

Audit response. The contractual efforts in question are more extensive than DISA's comments indicate as shown in Appendix A of this report. Further, DISA alludes to the contract efforts as minor and insignificant. Appendix A of the audit report and Enclosure 1 of DISA's response clearly show the contracts in question require a preponderant amount of technical and engineering studies, analyses, feasibility studies, prototype development and demonstration, system and network functional design, development, test and evaluation reviews and documentation, and other engineering and technical endeavors. The deliverables on those contracts consisted mainly of technical reports and briefings on specifications, designs, analyses, and capabilities.

DISA commented that no development had taken place or was planned for the NETS program. In the Specific Comments section of DISA's response, item 12, DISA challenged the auditors' finding that a contract for \$105 million was for RDT&E work. DISA asserted that over \$90 million was properly O&M funded for a leased telecommunications service; however, DISA did not comment on the remaining \$15 million.

DISA did not provide the source of information or the provisions used to support its conclusions that the efforts in question do not meet research and development tests of advancing the state of technology or of providing major or significant software or hardware changes to an existing system. The provisions governing RDT&E do not require such tests in the funding determination, nor do those provisions make a distinction between major versus minor, or significant versus insignificant, in requirements for funding RDT&E.

Due to the recent deferral of the NETS integration contract because of technical issues, initial operational capability is now slated for FY 1996. Many of the evolutionary processes for the NETS program under way since FY 1982 are clearly advancing the state of telecommunications technology. By FY 1996, NETS will have been under development for about 14 years, and DISA will have expended hundreds of millions of dollars on its development and cannot dismiss the efforts as minor or insignificant especially during the current era of declining Defense budgets.

Management comments. DISA asserted that it was the auditors' conclusion "that NETS is not yet an operational system or a fully tariffed or leased service and that any contracts prior to that leased service being instituted must be research and development funded."

Audit response. The information in Appendix A of the report clearly shows our determinations, supported by engineering reviews made by our Technical Assessment Division, that certain contract efforts were O&M efforts and thus were properly funded from the O&M appropriation. However, that same information also clearly shows that other contract efforts were RDT&E efforts and were not properly funded.

Management comments. The report should be corrected to properly denote the intended meaning of NCS and OMNCS.

Audit response. Corrections were made, where necessary, to make the distinction between NCS and OMNCS.

Management comments. The IG, DoD, was provided a complete copy of the NETS Integration Contract Request for Proposal, which included 12 amendments. It is evident that the report did not always take these amendments into account. For example, amendment 0011 clearly redefined that Phase I of the contract would last 10 years, versus the 5 years stated in the Other Matters of Interest section of the audit report. Amendment 0011 also clearly indicated that any equipment to be located in the PSN was to be procured by the service provider rather than by the Government.

Audit response. When we were notified that amendments redefined the period of contract performance and clarified equipment ownership, we requested those amendments from DISA. After reviewing the amendments, we agreed that the integration contract is intended to cover a 10-year period. However, there are decision points along the 10-year milestone in which changes in the contract strategy can be made.

We believe that DISA misinterpreted our comments in the "Other Matters of Interest" section in Part I of the report. The issue highlighted in that section is that the 1-year O&M appropriation should not be used to fund multiyear (up to 10 years) contracts nor to fund RDT&E efforts. As we stressed in the draft report, there is an opportunity for DISA to seek the proper funding for the performance of research and development on the NETS integration contract. Our comments were based on the contract proposal, which indicated that the contract would be performed in 3 phases over 10 years, as well as the RDT&E efforts discussed in the proposed statement of work, especially in Phase I of the contract. It is immaterial whether the proposal is for 5 or 10 years. We discussed this with DISA management in an attempt to avoid funding problems when the integration contract is awarded. We continue to maintain that the 1-year O&M appropriation should not have been used to fund multiyear contracts nor to fund RDT&E efforts.

Management comments. Since the funding allocation method had been approved by the Secretary of Defense, as Executive Agent of NCS, DISA questioned our inclusion of an objective pertaining to the propriety of the level of reimbursement to DoD by other Government agencies participating in the NETS program. DISA stated that if retained in the report, the findings relative to this objective should clearly indicate the Secretary of Defense's continuing involvement and approval of the funding allocation among NCS member organizations.

Audit response. The objective was announced in a memorandum to DISA at the outset of the audit in July 1990 and in subsequent discussions with OSD, DISA, and OMNCS management. There was no objection to the objective at that time, or since, until DISA responded to the draft audit report. OSD officials involved in the audit encouraged our pursuit of the propriety of non-DoD reimbursement levels. In our view, the objective was germane to the basic audit objective, which was to determine if the development and acquisition of the NETS was being managed effectively and efficiently. We looked at not only the allocation method, which had been properly approved within DoD and at the national level, but also the measures taken by DISA to collect the amounts required by the allocation. No deficiencies were noted. Thus, the report provides a balanced portrayal of the financial aspects of the NETS program.

Management comments. The draft report statement "... accumulated costs associated with NETS, undertaken from FY 1986 to FY 1990," is misleading and should be corrected.

Audit response. Management comments were noted, and appropriate revisions to this final report were made.

Management comments. Award of the integration contract may be premature, and the subsequent unsupported allegation of "questionable practices" is unwarranted. The report should clearly address the alleged questionable practices so that DISA can adequately respond to them, or the allegations should be deleted from the report.

Audit response. We changed the final report to clarify our comments that the practices were questioned by the auditors.

Management comments. DISA did not agree that the contract reflected hesitation on the propriety of a 10-year contract and a lack of confidence in the delivery of the services to be provided.

Audit response. Those statements were deleted from the final report.

Management comments. The NETS integration contract procurement was "scheduled" for award in December 1990 (FY 1991) with initial operating capability in December 1994 (FY 1995). The report states that the new deferred date for initial operating capability is FY 1996. The date makes the alleged RDT&E period appear longer by mixing the original (canceled) procurement analysis with the delayed acquisition date. The report should limit discussion to the procurement that was canceled, which was the basis for the report and should use only its dates, requirements, and conditions.

Audit response. We do not agree. The NETS has been under RDT&E for almost 10 years. With the delay of the integration contract, there is a possibility that RDT&E may continue for up to 14 years before the NETS initial operating capability is established.

Management comments. DISA stated that the report alleges that the Government would not obtain lower rates, longer discounts, or more favorable conditions of service from a 10-year integration contract than could be obtained from a single year contract; therefore, the proposed contract was not within the authority delegated by the General Services Administration to contract for periods up to 10 years. DISA categorically disagrees with this allegation because it will not be able to attract an integration contractor, nor will local exchange or inter-Local Access Transport Area (inter-LATA) carriers be willing to accommodate in their networks the required software or hardware augmentations needed for NETS, unless the Government's contractual obligation is for a significant period of time, i.e., the 10 years as stated by the DFARS and U.S. Code.

Audit response. DISA did not provide an example of its contention. The post-divestiture of the AT&T era has dramatically increased competition in the acquisition of telecommunications services. There was no indication during the audit that any acquisition strategy except the original strategy of having only one contractor to handle the entire NETS program implementation, service, and maintenance was ever envisioned. We provided an alternative, workable solution to the contract authority and funding predicament. DISA is developing new enhancements for the telecommunications industry's PSN, rather than leasing an existing service. The new enhancements provide a major expansion of existing telecommunications technology and are outside the authority granted for contracting up to 10 years.

DISA's comments that carriers would not be willing to accommodate required software or hardware augmentations are somewhat contradictory to its earlier comments discussed in this report. In the earlier comments, DISA stated that only minor software and some hardware modifications to existing systems were required for the NETS program. Given the comprehensive nature of the telecommunications industry, we believe that a multitude of carriers would be willing to accommodate such augmentations in their networks.

We request that, in responding to this final report, the DISA provide documentation to demonstrate that it would not be able to attract a contractor through any other contracting strategy and that local exchange or inter-LATA carriers would be unwilling to accommodate needed software and hardware augmentations.

Management comments. The finding incorrectly stated that only \$34 million of work was properly funded. The AT&T Survivable Signaling Network (SSN) contract contains at least \$90 million of O&M leased telecommunications services.

Audit response. Management is correct, and we have changed this report where necessary.

Management comments. The purpose and scope of the AT&T SSN contract (DCA200-90C-0011) is incorrectly described. The contract not only includes design, engineering, and implementation of SSN, but also the "delivery of a tariffed service from December 31, 1994, through December 31, 1999...." The fact that 5 years of this contract is for a leased service should be reflected.

Audit response. We agree and have corrected the report where necessary.

Management comments. The NS/EP Systems Engineering and Technical Assistance (SETA) contract (DCA100-87-C-0063) contains multiple tasks. The report should be revised to reflect a NETS value of only \$2.2 million instead of \$22.1 million.

Audit response. We agree that the value of the contract is \$2.2 million, and we changed the report accordingly. The contract in question required SETA in running the NETS program office. The contracted efforts were predominately O&M. This final audit report recognizes that the efforts were properly financed by O&M funds.

Summary. Management steadfastly maintains that it does not intend to change its funding practices, despite repeated notifications that such practices are improper. The funding practices are not in compliance with the Budget Manual and deny effective oversight of DoD funds used to finance RDT&E within the NETS program. The funding of RDT&E is not visible in the DISA budget because it is buried in the O&M budget. As a result, RDT&E work in the NETS program does not have to compete with RDT&E work in other programs in a period of declining Defense appropriations and escapes DoD scrutiny and congressional oversight.

The improper funding practices can be corrected by implementing the recommendations in this report. Therefore, in response to the final report, we ask that the Director, Defense Information Systems Agency, reconsider his position on the finding and recommendations and provide documentation necessary to support management's contentions (see the Status of Recommendations below).

The Director for Investment, Comptroller of the Department of Defense, provided an unsolicited response to the finding and recommendations. The complete text of the Director's comments is in Part IV.

Management comments. The Director did not specifically concur or nonconcur with the finding and recommendations. Rather, he stated that he did not concur that a clear violation of the Budget Manual existed. He stated that the appropriation used to finance the NETS contracts is a subjective judgment and that his review of the NETS contracts resulted in a less definite conclusion than the one expressed in this report. Moreover, the NETS contracts, including system improvement efforts, are fundamentally telecommunications services contracts; therefore, DISA's decision to use the O&M funding is a reasonable interpretation of the Budget Manual. The Director concluded that the issue becomes a largely semantic difference over whether software and hardware modifications within the NETS contracts meet the definition of "major" improvements.

The Director also stated that the recommendation seems to infer that using O&M funding misrepresents the nature of NETS efforts. DISA has not misrepresented the details concerning these contracts and has consistently budgeted the NETS contract with O&M funds based on a determination that the NETS efforts do not expand the current state of technology.

Audit response. We do not fully agree with the Director's position. The Director did not request or obtain information from the auditors that was used to support the finding and recommendations. Further, decision on which appropriation to use in financing the NETS contract is not a subjective judgment call, for the reasons already explained in this report, especially since chapter 251.5.M of the Budget Manual was enacted by the Comptroller of the Department of Defense. Chapter 251.5.M was enacted to stop improper funding practices specifically associated with funding of NETS program contracts addressed in our prior audit report. As discussed previously in this report, careful consideration must be given to the task that is to be funded, and the provisions of the FAR, DFAR, and Budget Manual must be applied objectively.

We do not agree that the contracts were fundamentally service contracts. As previously discussed, the NETS program has been an evolutionary development process since FY 1982 to provide an enhanced telecommunications capability that does not exist. In developing this enhanced service, the state of telecommunications technology is being materially expanded. According to chapter 251 of the Budget Manual, RDT&E funding is required for those new capabilities. We reiterate that the DoD criteria for determining when to fund any effort as RDT&E versus O&M was established and promulgated by the Comptroller of the Department of Defense, not the auditors. The Comptroller's criteria are clear and unequivocal.

We suggest that the Director for Investment, Office of Comptroller of the Department of Defense, reconsider his position on the final audit report. The Director may wish to obtain engineering consultant services from other DoD sources before developing his final position.

STATUS OF RECOMMENDATIONS

Response to Final Report Should Cover

<u>Number</u>	<u>Addressee</u>	<u>Reconsideration of Position</u>	<u>Implementation Date</u>	<u>Related Issue</u>
1.	DISA	X	X	X*
2.	DISA	X	X	

* Provide documentation to demonstrate that DISA would not be able to attract a contractor through any other contracting strategy and that local exchange or inter-LATA carriers would be unwilling to accommodate needed software and hardware augmentations.

PART III - ADDITIONAL INFORMATION

- APPENDIX A - Analyses of Contract Efforts Budgeted and Funded in the Operation and Maintenance Appropriation
- APPENDIX B - Memorandum on Resolution of IG, DoD, Report No. 86-038
- APPENDIX C - Summary of Potential Benefits Resulting from Audit
- APPENDIX D - Activities Visited or Contacted
- APPENDIX E - Report Distribution

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**APPENDIX A: ANALYSES OF CONTRACT EFFORTS BUDGETED AND FUNDED IN
THE OPERATION AND MAINTENANCE APPROPRIATION**

<u>Contract No.</u>	<u>Contract Amount</u>	<u>Correct Appropriation</u>
DCA100-86-C-0015	\$ 21,629,591	RDT&E
DCA100-87-C-0063	22,137,087 ^{1/}	O&M
DCA100-87-C-0139	7,909,356	RDT&E
DCA100-87-C-0142	2,988,931	RDT&E
DCA100-88-C-0050	3,379,338	O&M
DCA100-88-C-0062	1,629,036	RDT&E
DCA100-89-C-0044	5,858,507	O&M
DCA100-89-C-0086	2,395,736	RDT&E
DCA200-88-C-0019	7,443,684	RDT&E & O&M ^{2/}
DCA200-90-C-0011	105,698,704	RDT&E & O&M ^{3/}
DNMR00010	951,100	RDT&E
DNMR00065	656,000	RDT&E & O&M ^{4/}
DQMR90033	343,000	RDT&E
Total	<u>\$ 183,020,070</u>	

^{1/} Ten percent of this contract amount represents the NETS tasks.

^{2/} RDT&E is estimated at about \$4.43 million, and O&M is estimated at about \$3.01 million.

^{3/} RDT&E is estimated at about \$14.8 million, and O&M is estimated at about \$90.9 million.

^{4/} Total dollar amount of RDT&E could not be differentiated from that of O&M based on available funding documentation.

DCA100-86-C-0015. The contract was with AT&T Technologies, Inc., and is part of the evolutionary development of NETS. The contract was Task IV of the continuation of the NETS project being carried out by AT&T Technologies. Task IV objectives in the statement of work were to complete and document:

- the NETS System specification;
- detailed function specifications for the major NETS elements, consisting of the Call Control Module, Remote User Module, NETS Maintenance and Administrative Center, and Access Security Device;

**APPENDIX A: ANALYSES OF CONTRACT EFFORTS BUDGETED AND FUNDED IN
THE OPERATION AND MAINTENANCE APPROPRIATION (Continued)**

- the technical analysis and cost estimate for the engineering of Switch Internal Modules in 4ESS and 5ESS switches and for their implementation in the AT&T portion of the telecommunication industry's public switched network;
- a package of NETS network design tools;
- a proposed network design, with excursions; and
- engineering studies in several areas where work is proprietary to AT&T, or where work already begun needs to be completed, including a technical analysis and cost estimate for development and implementation of survivable, common-channel signaling for use in the AT&T Communications network.

The result of total Task IV efforts was the NETS system function and performance specification. The deliverable items on this contract consisted of status and technical reports.

There was no information in the statement of work that indicated any lease of an existing telecommunications service. According to FAR part 35.001, DFARS part 235.001, Budget Manual chapter 251, DISA Circular 400-50-1, and NCS Directive 2-2, the contract effort in the statement of work was clearly RDT&E, and Budget Manual chapter 251 requires that costs of such efforts are to be budgeted and funded in the RDT&E appropriation.

DCA100-87-C-0063. The contract was with Booz, Allen & Hamilton, Inc. The statement of work required SETA for the Government program office in running the NETS program. The statement of work also required the contractor to perform tasks in areas such as systems planning, program management, system design and analysis, and technical studies and analyses necessary to support the NCS efforts to increase the survivability of the nation's telecommunication resources. The deliverable items on the contract consisted of various reports on capability objectives, essential functions and requirements, threat, telecommunication deficiencies and priorities, and related initiatives. In accordance with the provisions of the FAR, DFARS, and Budget Manual, contract efforts were predominately O&M, and were properly budgeted and funded in the O&M appropriation.

**APPENDIX A: ANALYSES OF CONTRACT EFFORTS BUDGETED AND FUNDED IN
THE OPERATION AND MAINTENANCE APPROPRIATION (Continued)**

DCA100-87-C-0139. The contract was with Northern Telecom, Inc. The statement of work required the contractor to enhance the capability of the DMS-100 telecommunications switch to achieve NETS functionality in a Switch Internal Module (SIM), known as the DMS-SIM. That enhancement improves and advances the technical capability of the telecommunications switch as part of the attempt to provide for the Government's survivability requirement. A SIM capability for the DMS-100 switch provides NETS planners with an element of significant utility for an operational NETS. The SIM capability advances the state of telecommunications technology and capability.

Specific objectives were to provide full NETS call-controller capability for the DMS-100 family product line and to demonstrate this DMS-SIM capability within selected switches; to conduct DMS-SIM verification and a network operating capability demonstration of one interexchange carrier; to prepare a plan to implement the DMS-SIM throughout that carrier's network; to conduct DMS-SIM verification and a network operational capability demonstration at access tandems in at least one Regional Bell Operating Company (RBOC), including a demonstration of connectivity; to prepare a plan to implement DMS-SIMs at all access tandems in the RBOCs that use DMS-100 switches; and to provide insight into using DMS-SIM capabilities to integrate Government-owned or leased networks into NETS. The deliverable requirements consisted of reports, briefings, and capability demonstrations rather than a lease of an existing telecommunications service.

Contract efforts involving these objectives are defined clearly as RDT&E in FAR part 35, DFARS part 235, Budget Manual chapter 251.5G, DISA Circular 400-50-1, and NCS Directive 2-2. Budget Manual chapter 251.5.M requires that the associated costs are to be budgeted and funded in the RDT&E appropriation.

DCA100-87-C-0142. The contract was with U.S. Sprint. This contract was another element of the evolutionary development of NETS. The contract was to determine how NETS can be implemented in the evolving U.S. Sprint network to carry NS/EP traffic during emergencies. The statement of work required the contractor to examine its own capabilities to satisfy the Government's NS/EP telecommunications requirements with regard to present, planned, future, and unplanned but possible network capabilities. It also required the contractor to propose placement of NETS call controllers in its network; to develop performance specifications and cost-to-Government estimates in areas determined through previous studies to be of vital interest in developing a viable

APPENDIX A: ANALYSES OF CONTRACT EFFORTS BUDGETED AND FUNDED IN THE OPERATION AND MAINTENANCE APPROPRIATION (Continued)

NETS service capability. The deliverable items on this contract were status briefings and various technical reports, including a report entitled, "Analysis of Existing U.S. Sprint Capabilities."

There was no lease of an existing telecommunications service, and there were no O&M elements in the contract scope or statement of work. Rather, the efforts performed on the contract are clearly defined as RDT&E efforts according to FAR part 35, DFARS part 235, Budget Manual 251, DISA Circular 400-50-1, and NCS Directive 2-2. Budget Manual chapter 251 requires that associated costs be budgeted and funded in the RDT&E appropriation.

DCA100-88-C-0050. The letter contract was with the Small Business Administration, issued to Network Solutions, Inc., and constituted another element of the evolutionary development of NETS. The objectives described in the statement of work were to provide ongoing maintenance of NETS Software Tools System (NSTS), development of enhancements to the NSTS, training of the NSTS user community, configuration management support, and the enforcement of quality assurance standards with respect to the development and operation of the NSTS. Some RDT&E effort was required in the contract. However, the total effort was predominately O&M. According to the Budget Manual, the associated costs were properly budgeted and funded in the O&M appropriation.

DCA100-88-C-0062. The contract was with the MCI Telecommunications Corporation. This contract was also an element of the evolutionary development of NETS. The statement of work and deliverable items paralleled those for contract number DCA100-87-C-0142 with U.S. Sprint.

The scope of work did not have a requirement to lease an existing telecommunications service. This contract serves as a good example of the dilemma the OMNCS faced in developing an acquisition strategy. We recognize that some of the tasks under this contract could be funded from the O&M appropriation. But, the Budget Manual anticipates such situations and states that when there is doubt about which appropriation (O&M versus RDT&E) should be used to provide funding, RDT&E should be used. For these reasons and those associated with contract DCA100-87-C-0142 above, Budget Manual chapter 251 requires that the associated costs be budgeted and funded in the RDT&E appropriation.

**APPENDIX A: ANALYSES OF CONTRACT EFFORTS BUDGETED AND FUNDED IN
THE OPERATION AND MAINTENANCE APPROPRIATION (Continued)**

DCA100-89-C-0044. The contract was with Communication Systems Engineering and Integration Center. The contract was also an element of the evolutionary development of NETS. The statement of work required the contractor to provide SETA services to the DCA and the OMNCS for the implementation of the NETS program. The elements in the statement of work were predominately O&M. According to the Budget Manual, this type of service should be budgeted and funded in the O&M appropriation.

DCA100-89-C-0086. The contract was with Martin Marietta Corporation and is another element of the evolutionary development of NETS. The statement of work required the contractor to examine, design, and evaluate capabilities and ways in which NETS features and functions could be implemented in PSN assets controlled by the RBOCs and how NETS features and functions could be implemented within RBOC corporate communications networks. The statement of work also required RDT&E tasks in the areas of dynamic and expanded route selection, survivable signaling and continuous service, telecommunication traffic access security controls, and preset connections and precedence/preemption service. The deliverable items on this contract were various briefings and technical reports on each of those areas.

This contract presents another case of a design review, not a lease of existing telecommunications services. The work was clearly RDT&E, according to FAR part 35, DFARS part 235, Budget Manual chapter 251, DISA Circular 400-50-1, and NCS Directive 2-2. The Budget Manual chapter 251 requires that associated costs were to be budgeted and funded in the RDT&E appropriation.

DCA200-88-C-0019. The contract was with AT&T Communications, Inc., for development, implementation, and maintenance of Robust Non-Hierarchical Routing (RNHR) service, as a key telecommunication element in support of NETS. RNHR was an adaptation of commercial routing capability utilized in the AT&T Communications network called Dynamic Non-Hierarchical Routing. Although RNHR would not increase the physical survivability of the AT&T switching and transmission functions, it added robustness and flexibility for routing NS/EP telecommunications traffic through trunks and switches most likely to survive major damage resulting from natural or man-made disaster. That robustness and flexibility would provide more powerful communications traffic routing procedures to qualified NETS users than was available to other PSN subscribers, enabling the use of routes through the AT&T network that can circumvent damaged or

**APPENDIX A: ANALYSES OF CONTRACT EFFORTS BUDGETED AND FUNDED IN
THE OPERATION AND MAINTENANCE APPROPRIATION (Continued)**

blocked facilities used for routine traffic. The importance of the RNHR service to add substantial enhancements to the PSN was endorsed by the Institute for Defense Analyses in a report prepared for OMNCS entitled, "Nationwide Emergency Telecommunications Service, Risk Assessment and Cost-Benefit Analysis," December 1988. The deliverable items on this contract were various technical briefings and reports.

The work under this contract was divided into three phases. Phases I and II were clearly RDT&E, and the costs should have been budgeted and funded in the RDT&E appropriation. Phase III was O&M, and the costs were properly budgeted and funded in the O&M appropriation. Details leading to our determination follow.

Phase I encompassed the start-up efforts necessary to identify RNHR survivable routing and to ensure that all changes implemented into the AT&T network meet the Government requirements before implementation of RNHR. Phase II was the actual implementation of RNHR as a service to the Government.

Phase III was continued maintenance, operation, exercise support, and update of RNHR based on increased routing in the AT&T network throughout the life of the contract. Each of those phases was further divided into tasks.

- The first task in Phase I included network engineering to research, develop, test, evaluate, and report on service performance parameters; potential RNHR design modifications; RNHR performance for various damage scenarios and its effect on NETS and the evolving NETS network designs; physical and logical routes for RNHR; and the supporting software and hardware modifications specific to RNHR. The efforts in this task are stated in terms of preparing a report that is the only deliverable called for in the statement of work. Before preparing such a report, a substantial amount of engineering, research, development, and trade-off studies had to be performed.

- The second task in Phase I was for an RNHR start-up plan and schedule. The statement of work supported the OMNCS position that the RNHR was not an existing capability at the time of contract award. The statement of work called for a plan that provided a breakdown of specific efforts required to implement RNHR in an AT&T 4ESS switch and then into the 4ESS network.

**APPENDIX A: ANALYSES OF CONTRACT EFFORTS BUDGETED AND FUNDED IN
THE OPERATION AND MAINTENANCE APPROPRIATION (Continued)**

- The third task in Phase I was for an RNHR test plan for detailing the test requirements and methodology to be used to verify demonstration, acceptance, and operational requirements.

- The fourth task in Phase I was for capability testing. This task required AT&T to perform two tests to demonstrate that the RNHR service could meet Government-specified performance capabilities and requirements, before RNHR implementation.

Phase II was for RNHR implementation. This phase consisted of efforts for pre-service design, capability testing, and implementation of RNHR as a tariffed service.

Phase III was for RNHR operation and maintenance. Although software and algorithm updates and modifications are required periodically, the efforts in this phase are predominately O&M.

According to FAR part 35, DFARS part 235, and Budget Manual chapter 251, the efforts in Phases I and II were related to the determination and exploitation of improvements in technology, materials, processes, methods, devices, or techniques, and proof-of-concept studies and demonstrations. Those provisions define such efforts as RDT&E. Budget Manual chapter 251 requires that costs of those efforts are to be budgeted and funded in the RDT&E appropriation. DISA improperly funded those efforts from the O&M appropriation. Phase III efforts were predominately O&M. Those efforts were envisioned as the type of work in which the O&M appropriation is used to fund associated costs, and DISA properly funded those costs from the O&M appropriation.

DCA200-90-C-0011. The contract was with AT&T Communications, Inc., to engineer and implement a highly survivable, common-channel signaling capability in the AT&T Network in support of NETS. The contract contained recognition that survivable telecommunications require survivable signaling and that AT&T's implementation of common-channel signaling was extremely vulnerable, because of the AT&T centralized management and control structure. The work under the contract included engineering; design of systems, hardware, and software; and lease of the SSN as a tariffed service for 5 years, commencing in December 1994. SETA was required to determine the optimum design based on NS/EP user requirements, locations, and various threat scenarios. The hardware and software engineering involved laboratory engineering and fabrication of elements required for this new capability to operate within AT&T's 4ESS switch and network. The effort included other developmental work, such as

**APPENDIX A: ANALYSES OF CONTRACT EFFORTS BUDGETED AND FUNDED IN
THE OPERATION AND MAINTENANCE APPROPRIATION (Continued)**

switch modifications, interface engineering, and capability demonstrations. The deliverable items on this contract were various technical reports. Tasks required under this contract were clearly RDT&E, according to the provisions listed above. Accordingly, the associated costs should have been budgeted and funded in the RDT&E appropriation.

DNMR00010. This contractor task order was with the MITRE Corporation, under Air Force Contract F19628-89-C-0001, and required technical review and evaluation of contracts and deliverables in the NETS program to monitor the technical progress of contractual efforts, to evaluate complex contractual and regulatory issues for the NETS contracts, and to provide technical support for the evaluation of NETS integration contract proposals. In short, the task order was for technical support to evaluate contractor proposals received in response to the NETS integration contract. The deliverable items on this task order were status and technical reports and technical letters. Although we believe this task order is an effort that is customarily performed in-house by DoD activities, if contractual effort was required and the contracts were all in the pre-implementation phase of the NETS program, the associated costs should have been budgeted and funded in the RDT&E appropriation. DISA improperly funded those costs from the O&M appropriation.

DNMR00065. This contractor task order was under Air Force Contract F19628-90-C-0001 and required the MITRE Corporation to provide systems research and planning to support the NCS joint industry-government planning process, general systems engineering, acquisition, test and evaluation, and program management support for the implementation of the NETS; commercial satellite communications interconnectivity; and commercial network survivability initiatives, which are the responsibility of NCS. In our opinion, Mitre was given total engineering and integration responsibility for the Telecommunications Service Priority System, as envisioned in this contract, and a license to interpret and implement any solution to the initiative posed by NSDD 97 and Executive Order 12472. The deliverable items on this task order were management, status, and technical reports. This effort was not a legitimate use of O&M monies appropriated for leasing an existing telecommunications service. DISA properly funded the costs associated with program management support in the O&M appropriation, but improperly funded the remaining costs in the O&M appropriation. Those remaining costs should have been budgeted and funded in the RDT&E appropriation.

**APPENDIX A: ANALYSES OF CONTRACT EFFORTS BUDGETED AND FUNDED IN
THE OPERATION AND MAINTENANCE APPROPRIATION (Continued)**

DQMR90033. This purchase request was for another Government agency to tool, assemble, integrate, and test prototype access security devices in support of the NETS program; to prepare software required to emulate a NETS call controller; and to demonstrate that those devices can be connected to a call controller. Those efforts involved development work to design, construct, and test hardware and software under the NETS program, and were clearly RDT&E, as defined, rather than the lease of an existing telecommunications service. DISA improperly funded associated costs in the O&M appropriation.

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Appendix B: Memorandum on Resolution of DoD IG Report No. 86-038



Audit Followup

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202

September 29, 1986

MEMORANDUM FOR RECORD

SUBJECT: Resolution of DoD IG Report No. 86-038, "Procurement Functions and Contracts of the Defense Communications Agency"

This memorandum sets forth the agreement for resolving the disputed finding and recommendation in the subject audit report.

ISSUE

The auditors questioned the propriety of financing certain developmental efforts for enhancing the survivability of the national telecommunications network with Operation and Maintenance (O&M) funds instead of Research, Development, Test and Evaluation (RDT&E) funds. The auditors reported that the Defense Communications Agency (DCA) had used \$18,850,000 in FY1982-4 O&M funds for network design studies, system engineering studies and the development of experimental hardware and software needed for concept validation. The audit report recommended that the O&M funds be "backed out" and that these efforts be charged to the RDT&E accounts.

MANAGEMENT POSITION

The DCA nonconcurred with both the audit finding and the recommendation. The DCA stated that the use of O&M funding was correct, and that the work had "transitioned via OSD budgeting from RDT&E to O&M during fiscal years 1982, 1983 and 1984." (Both sides stated that their positions conformed to applicable statutes.)

DISCUSSION

My office requested that this case be reviewed by the Office of General Counsel, DoD, and the Office of the Assistant Secretary of Defense (Comptroller). The latter prescribes DoD budget procedures and has cognizance over the DoD budget formulation, review and justification processes. It was determined:

- That the DCA funding actions were questionable and that the OASD(C) believes the efforts in question "may have been more appropriately funded in RDT&E".
- That further effort should be directed toward the future, rather than unproductively examining complex past actions. In this connection, it is noted that the appropriations involved have expired and no useful purpose would be served by adjusting expired balances.


- That the primary responsibility for future action rests in DCA, which must ensure that its budget submissions and justifications are clear and in compliance with appropriations availability and the DoD Budget Guidance Manual.
- That, in view of the apparent complexities involved and DCA's past practice, the DoD Budget Guidance Manual should clarify the funding policy of up-front development costs associated with future leased services. It is recognized, however, that while clarification of the Budget Guidance Manual to resolve this particular issue would be appropriate, it should not be considered as a precedent whereby audit findings would routinely be resolved through changes to the Manual.

RESOLUTION

Based on the foregoing discussion, it is agreed that this matter is resolved as follows:

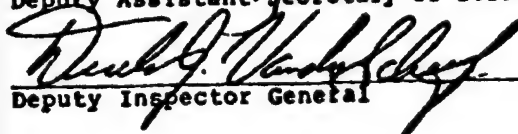
- The OASD(C) shall emphasize to DCA the need to place special emphasis during its budget formulation process on ensuring that budget proposals comply with all criteria governing appropriations availability.
- The OASD(C) shall include funding policy for up-front development costs associated with future leased services in the next revision of the DoD Budget Guidance Manual.

My office will follow up on this agreement, as well as on the other, previously agreed-upon findings and recommendations in this audit report.


Robert J. Lieberman
Assistant Inspector General

Concur:


Deputy Assistant Secretary of Defense (Program/Budget)


Deputy Inspector General

cc: Comptroller, DCA
Assistant General Counsel (F&IG)
Assistant Inspector General (Auditing)

APPENDIX C: SUMMARY OF POTENTIAL BENEFITS RESULTING FROM AUDIT

<u>Recommendation Reference</u>	<u>Description of Benefits</u>	<u>Type of Benefit</u>
1.	<u>Compliance.</u> Discontinues the practice of using the O&M appropriation to finance development costs and will result in compliance with the Budget Manual.	Nonmonetary
2.	<u>Compliance.</u> Requires clarity in budget submissions that will result in proper differentiation of RDT&E versus O&M efforts in compliance with the Budget Manual, and will facilitate DoD and congressional oversight of RDT&E and O&M expenditures.	Nonmonetary

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APPENDIX D: ACTIVITIES VISITED OR CONTACTED

Office of the Secretary of Defense

Secretary of Defense, Washington, DC
Deputy Secretary of Defense, Washington, DC
Under Secretary of Defense for Acquisition, Washington, DC
Director, Defense Research and Engineering, Washington, DC
Assistant Secretary of Defense (Command, Control, Communications and Intelligence), Washington, DC
Assistant Secretary of Defense (Program Analysis and Evaluation), Washington, DC
Comptroller of the Department of Defense, Washington, DC
Director, Operational Test and Evaluation, Washington, DC
Director, Joint Staff, Washington, DC

Department of the Army

Director of Information Systems for Command, Control, Communications, and Computers, Washington, DC

Department of the Navy

Naval Computers and Telecommunications Command, Washington, DC

Department of the Air Force

Deputy Chief of Staff, Systems for Command, Control, Communications, and Computers, Washington, DC

Defense Agencies

Defense Advanced Research Projects Agency, Arlington, VA
Defense Information Systems Agency, Washington, DC
Defense Commercial Communications Office, Scott Air Force Base, IL
Defense Communications Engineering Center, Reston, VA
Defense Mobilization Systems Planning Activity, Falls Church, VA
Defense Contract Audit Agency, Alexandria, VA
Defense Intelligence Agency, Washington, DC
Defense Logistics Agency, Alexandria, VA
Defense Technical Information Center, Alexandria, VA
National Security Agency, Fort George G. Meade, MD

Non-DoD Activities

Department of Energy, Washington, DC
Department of State, Washington, DC
Department of Transportation, Washington, DC
Federal Communications Commission, Washington, DC

APPENDIX D: ACTIVITIES VISITED OR CONTACTED (Continued)

Non-DoD Activities (Continued)

Federal Emergency Management Agency, Washington, DC
General Accounting Office, Washington, DC
General Services Administration, Washington, DC
National Communications System, Washington, DC
National Security Council, Washington, DC
Office of Management and Budget, Washington, DC
Office of National Security Affairs, Washington, DC
Office of Science and Technology Policy, Washington, DC

APPENDIX E: REPORT DISTRIBUTION

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition
Director, Defense Research and Engineering
Assistant Secretary of Defense (Command, Control, Communications,
and Intelligence)
Assistant Secretary of Defense (Force Management and Personnel)
Assistant Secretary of Defense (International Security Affairs)
Assistant Secretary of Defense (Program Analysis and Evaluation)
Assistant Secretary of Defense (Public Affairs)
Comptroller of the Department of Defense
Director, Operational Test and Evaluation
Director, Administration and Management
Assistant to the Chairman, Joint Chiefs of Staff
Director, Joint Staff

Department of the Army

Secretary of the Army
Assistant Secretary of the Army (Financial Management)
Auditor General, U.S. Army Audit Agency

Department of the Navy

Secretary of the Navy
Assistant Secretary of the Navy (Financial Management and
Comptroller)
Auditor General, Naval Audit Service

Department of the Air Force

Secretary of the Air Force
Assistant Secretary of the Air Force (Financial Management and
Comptroller)
Auditor General, Air Force Audit Agency

Defense Agencies

Director, Defense Advanced Research Projects Agency
Director, Defense Information Systems Agency
Director, Defense Intelligence Agency
Director, National Security Agency

APPENDIX E: REPORT DISTRIBUTION (Continued)

Non-DoD

The Executive Office of the President

Assistant to the President for National Security Affairs
Assistant to the Vice President for National Security Affairs

Agencies of the Executive Office of the President

National Security Council
Office of Defense Policy and Arms Control
Office of Intelligence Programs
Office of National Security and International Affairs
Office of Management and Budget
Office of Science and Technology Policy

Presidential Advisory Organizations

President's Intelligence Oversight Board
President's National Security Telecommunications Advisory
Committee

Congressional Committees

Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Subcommittee on Communications, Committee on Commerce,
Science, and Transportation
Senate Committee on Governmental Affairs
Ranking Minority Member, Senate Committee on Armed Services
House Subcommittee on Defense, Committee on Appropriations
Ranking Minority Member, House Committee on Appropriations
House Committee on Armed Services
House Subcommittee on Telecommunications and Finance, Committee
on Energy and Commerce
House Committee on Government Operations
House Subcommittee on Legislation and National Security,
Committee on Government Operations
House Committee on Science, Space, and Technology

Other Congressional Offices

Congressional Budget Office
Office of Technology Assessment

APPENDIX E: REPORT DISTRIBUTION (Continued)

Other Non-DoD

General Accounting Office
NSIAD Technical Information Center

National Communications System

Deputy Manager, National Communications System

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PART IV - MANAGEMENT COMMENTS

Defense Information Systems Agency

Comptroller of the Department of Defense

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Comments from Defense Information Systems Agency



IN REPLY
REFER TO CEA

DEFENSE COMMUNICATIONS AGENCY

WASHINGTON D.C. 20305 2000

3 September 1991

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING

SUBJECT: Draft Audit Report on the Funding of Nationwide Emergency
Telecommunications Service (NETS) (Project No. ORD-5016.01)

1. Enclosed is the Defense Information Systems Agency (DISA) response to the subject audit. Also enclosed is a copy of the DoD Comptroller's response.
2. Point of contact is Ms. Audrey Moore. She may be reach on 692-2172.

2 Enclosures a/s


EDWARD J. HENDERSON, JR.
Colonel, USAF
Chief of Staff

Effective 25 June 1991, DCA was redesignated the Defense Information Systems Agency (DISA)

Comments from Defense Information Systems Agency (continued)

COMMENTS ON DRAFT NETS DOD IG AUDIT REPORT

The DOD Inspector General (IG) has been auditing the Nationwide Emergency Telecommunications Service (NETS) program for over a year. This effort is a follow-on to a previous audit report from the mid-80s. They have produced a draft report that questions the appropriateness of using O&M funds for NETS contractual efforts, and have provided recommendations that we revise our funding profile for NETS in the majority of contractual efforts to use R&D funds. The DISA Comptroller, the Acquisition Management Directorate and the Deputy Manager, National Communications System (NCS) have conducted a thorough and extensive review of the NETS contract program and have concluded that O&M funds were properly used in the past and are the correct appropriation for future NETS efforts. We, therefore, strongly disagree with the findings and recommendations of the audit report. Comments addressing our areas of concern, rationale for disagreement, and proposed corrections are stated below.

General Comments on Audit Report: The IG's conclusions are almost solely based on a misinterpretation of the DOD Budget Guidance Manual, Section 251.5M. The IG used this one particular section, added in August, 1987, without considering any other provision and clearly out of context with the rest of the manual's guidelines for the proper use of R&D. The IG audit team members appear to have relied on a very strict, and we believe an incorrect reading, of a single section, to very narrowly define the proper usage of R&D and O&M appropriations as related to telecommunications leased services.

The DISA Comptroller, in conjunction with the Acquisition Management Directorate and the Office of the Manager, NCS, have thoroughly reviewed the NETS contracts in question, and concluded that O&M was properly used to fund these efforts. We have also reviewed the proposed Statement of Work for the NETS System Integration contract, which is intended to be procured as a leased service scheduled for award in FY 1993 and determined that this effort is also properly budgeted in the O&M appropriation. The majority of the NETS contractual efforts in question involve data collection from the MCI, SPRINT, AT&T, and Bell Operating Company's networks; minor software and some hardware modifications to existing systems; analysis of current network design and configuration to determine its ability to meet national security and emergency preparedness (NS/EP) requirements; program assessment, technical and acquisition evaluation support; and, routine engineering support and

services. A number of the contracts in question have been completed or will be within the near future. Several are on-going either as current or future leased, tariffed services. None of the efforts in question meets the R&D test of expanding

Enclosure 1

the current state of technology, or providing major or significant software or hardware changes to an existing system. The IG has concluded that because NETS is not yet an operational system or a fully tariffed or leased service, any contracts prior to that leased service being instituted must be R&D funded. This is a gross distortion of the proper use of the R&D appropriation. The overall NETS effort is based on utilizing existing systems and networks and adapting them to provide more robust and diverse service or capabilities to support White House directed NS/EP requirements.

The following comments are provided on the NETS Audit Report and must be considered in context with the overall remarks stated above.

General comments:

1. The term NCS is incorrectly used to identify the staff that supports the Manager, NCS, which is called the Office of the Manager, NCS (OMNCS). NCS refers to the formal organization consisting of the 23 member Government agencies. The report should be corrected to properly denote the intended meaning of NCS or OMNCS.
2. The DoD IG was provided a complete copy of the NETS IC RFP which included the original material and 12 amendments. The copy was not a conformed version, i.e., the amendments were as distributed and were not already incorporated into the individual segments of the RFP. It is evident from some of the comments that these amendments were not always taken into account. For example, "Amendment 0011 clearly redefined again that Phase I of the contract would last 10 years versus the five years stated on page eight of the audit report. Amendment 0011 also clearly indicated that any equipment to be located in the PSN was to be procured by the service provider rather than the Government.
3. The DoD IG had copies of the NETS Acquisition Strategy Paper of October 1988 and NETS Acquisition Plan of December 1988. The RFP, as amended through amendment 12, had evolved significantly under the control of a Source Selection Advisory Council (SSAC) and a Source Selection Authority (SSA) during 1989-90. These changes were not incorporated into the two year old planning documents because there was no requirement to do so nor would it have added any value to the process. Some of the comments incorrectly reflect DISA's position, specifically about hesitation about the propriety of a 10 year contract, confidence of delivery of services, and government ownership of NETS elements, because of an apparent reliance on the two year old documents.

Comments from Defense Information Systems Agency (continued)

Final Report Reference

i & 2

Specific Comments:

1. Pages 1. and 3, second dot points. It is questionable whether this objective is appropriate for this report. The funding of the National Level NS/EP Telecommunications Program (NLP) was mandated by NSDD 201 referenced on page 1, superseded by National Security Directive-56, following significant consultation with, and the approval of, the Executive Agent, NCS (Secretary of Defense) based upon many factors including the number of potential DoD users and the significant benefit to be derived by DoD. Subsequently, the Executive Agent reviewed and forwarded, without disagreement, the funding shares of five annual NLPs to the Assistant to the President for National Security Affairs for approval. If retained in the report, the findings relative to this objective should clearly indicate the Secretary of Defense's continuing involvement and approval of the funding allocation among NCS member organizations.

2

2. Page 4, lines 1-3. The statement "... accumulated costs associated with NETS, undertaken from FY 1986 to FY 1990" is misleading. It can be interpreted to mean that the cost of NETS during FY 1986-1990 was \$183 million dollars which is incorrect. The cost of NETS during these five years was approximately \$75 million. The remaining costs are included in contracts which continue through December 31, 1999 of which over \$65 million are programs for FY 1995 and later. This section should be clarified and corrected to reflect the comments submitted to Page 23, Appendix B, of the report.

3

3. Page 6, second paragraph. The conclusion that award of the integration contract may be premature and subsequent unsupported allegation of "questionable practices" is unwarranted. The NETS integration contract acquisition and the evolution of the NLP and the NETS program has been conducted under the close scrutiny of the OMB, the Executive Agent, the NCS Committee of Principals (COP), and the 23 member agencies. Five NLPs have been prepared annually since 1986. Each NLP was approved by the NCS COP and COR, except FY 1992 NLP, and forwarded to the Executive Agent for review before submission to the White House. They were reviewed by the NSDD-97 Steering Group/Policy Coordinating Committee (PCC) on National Security Telecommunications and Information Systems consisting of the National Security Council, the Office of Science and Technology Policy (OSTP), the Office of Management and Budget (OMB), and the NCS Executive Agent. The Director, OMB on behalf of the NSDD-97 Steering Group/PCC, has approved the NLPs and directed DoD and the other NCS member agencies to fund the NLPs.

The Manager, NCS, has conducted both internal and external reviews of the NETS program. The National Academy of Sciences was commissioned to conduct two studies of NETS and NETS-related telecommunications issues. Both studies supported NETS and stated the PSN is the preferred network for building an NS/EP capability and that NETS was needed now. The Institute of

Comments from Defense Information Systems Agency (continued)

Final Report Reference

Defense Analyses (IDA) was tasked by the Manager, NCS, to conduct a Risk Assessment and Cost-Benefit Analysis for NETS. IDA found that NETS was technically feasible, the risks minimal, and that it can be achieved within current cost projections.

The RFP was released in August 1989 with full knowledge and agreement of all organizations involved in NETS planning. The directed two-year delay in the award of the integration contract resulted from the lack of FY 1991 and 1992 DoD funding as well as the concerns expressed by the DOT and FEMA 15 months after the RFP was issued. Operation Desert Storm resulted in the cancellation of a number of DoD programs as a result of funding, while NETS was only delayed. The funding issue which is not addressed in the report, more than any other, resulted in the two-year delay in contract award. However, this delay has allowed time to review the technical and requirements questions that had been raised.

This section of the report must clearly include the funding problem related to the delay in the program. Additionally, it should clearly address the alleged questionable practices so DISA can adequately respond to them or the allegations should be deleted from the report.

3 & 4

4. Page 6 to 8 - We are concerned with undocumented and vague charges about the NETS system integration contract originally scheduled for award in FY 1991. To make a charge that there were "questionable practices with respect to funding and contractual authority" and then state you are making no recommendations in this report is a questionable practice in and of itself. It is requested that these comments be deleted from the final report since they are not explained or deemed relevant even by the authors of this report.

4

5. Page 8 - DISA does not agree that there was any hesitation about the propriety of a 10-year contract or lack of confidence in the delivery of the services to be provided. The acquisition plan clearly states that the contract would include all three phases of the acquisition: engineering, implementation and initial operation, and continuing operation of the service. The decision to leave the last five years of the contract as an unpriced option was based not on hesitation or a lack of confidence, but on the inability of offerors to provide either a responsive cost-plus or fixed-price proposal until the Government had selected an implementation option after award of the contract.

4

6. Page 8, last paragraph. The NETS IC procurement was "scheduled" for award in December 1990 (FY91) with Initial Operating Capability (IOC) in December 1994 (FY94). In describing this on pages 8 and 9, the report uses FY96 for the IOC, the new deferred date. This makes the alleged RDT&E period appear longer by mixing the original (canceled) procurement analysis with the delayed acquisition date. The report should

Comments from Defense Information Systems Agency (continued)

Final Report Reference

limit its discussion to the procurement that was canceled which was the basis for the report and should only use its dates, requirements, and conditions.

4 7. Page 8 - Comments stated above in the opening paragraph concerning the auditor's misreading of the Budget Guidance Manual are evident here.

4 8. Page 9, second paragraph. DISA does not agree that a reasonable acquisition strategy is to break the integration contract into three contracts with each contract being a competitive acquisition. This section requires revision based upon the following comments.

Such an approach ignores the realities of the telecommunications industry and the basic premise of the NETS procurement. The Government's intention from the start has been to acquire the NETS service, an augmentation to the Public Switched Network (PSN), from one integration contractor who will be responsible for designing the augmentation, provisioning that augmentation in the PSN, and operating and maintaining the service. This approach reflects the corporate diversity of the post-AT&T divestiture telecommunications industry. The Government does not own any equipment so there is no Government Furnished Equipment (GFE) to dilute the integration contractor's responsibility by the GFE being late, defective, etc.

Three separate competitive contracts would result in significant uncertainty among the offerors and increase their proposal costs, greatly increase the time until a usable service is in place, and most likely result in a significant cost increase for NETS. The proposed competitions would have to be consecutive and would require the products of the preceding contracts before completing the next competition. The result would be a much longer time between initial award and the provision of the service and significantly more work load and risk for the Government with little benefit derived.

Multiple contracts could also result in no offerors or a non-competitive situation for the O&M contract. The concept of placing full responsibility for the entire service on a single contractor has been extensively analyzed and will result in the best buy and least risk for the Government.

The description of the terms of the proposed contract are incorrect. Phase I, while covering a five-year span, included two years of service nationwide, one year each at initial level of capability and a full capability under a partly concurrent Phase II. Phase III represented the steady state operation of NETS for the remaining five years of the contract.

6 9. Page 10. The report alleges that the Government would not obtain lower rates, longer discounts, or more favorable conditions of service from a ten-year integration contract than

Comments from Defense Information Systems Agency (continued)

Final Report Reference

could be obtained from a single year contract; and therefore, the proposed contract was not within the authority delegated by the General Services Administration to contract for periods of up to 10 years. DISA categorically disagrees with this allegation because it will not be able to attract an integration contractor, nor will local exchange or inter-LATA carriers be willing to accommodate in their networks the required software or hardware augmentations needed for NETS, unless the Government's contractual obligation is for a significant period of time, i.e., the ten years envisaged by DFARS and U.S. Code.

7 10. Pages 9 to 15 - The auditor's continued misunderstanding and narrow misreading of the DOD Budget Guidance Manual is fully evident in this section. A summary of the contracts in question and DISA's assessment that they were properly funded in the O&M appropriation follows in Enclosure 1.

8 11. Page 14, first paragraph. The finding contained in the paragraph that only \$34 million of work was properly funded is incorrect. As noted in the comments to Page 14, second paragraph, and Page 23, Appendix B, to the report, the AT&T SSN contract contains at least \$90 million of O&M leased telecommunications services.

8 & 29 12. Page 14, last paragraph, and Page 27, last paragraph. The purpose and scope of the AT&T survivable signaling network (SSN) contract (DCA200-90-C-0011) is incorrectly described in these sections. The contract not only includes the design, engineering, and implementation of SSN, but the "delivery of a tariffed service from December 31, 1994 through December 31, 1999" as stated on Page 31 of the AT&T proposal which became part of the contract. Perhaps, only the SOW was reviewed and not the final contract. As a result, over \$90 million (85 percent) of the \$105 million shown in the summary table is properly O&M funding for a leased telecommunications service. The fact that five years of this contract is for a leased telecommunications service should be reflected throughout the report.

23 13. Page 23, table and page 24, first paragraph: The NS/EP SETA contract (DCA100-87-C-0063) awarded to Booz, Allen and Hamilton contained multiple tasks. The NETS task represented only 9-10 percent of the total contract costs. The summary table and other sections of the report should be revised to reflect a NETS value of only \$2.2 million in place of \$22.1 million.

The following enclosure is a summary of each of the contracts under question in the IG report. It is clear that these efforts fall within the boundaries of the O&M appropriation and do not meet the definition of R&D work. The IG audit team members appear to have relied on a very strict, and we believe an incorrect reading of a single section, to very narrowly define the proper usage of R&D and O&M appropriations as related to telecommunications leased services.

Comments from Defense Information Systems Agency (continued)

PURCHASE REQUEST #: QNCS-86-017

DISA CONTRACT NUMBER: DCA100-86-C-0015

ACQUISITION TITLE: NETS Task IV

CONTRACTOR: AT&T

REQUIREMENT: Complete and document NETS system specifications, and develop functional specifications for the following major NETS elements: call controller (CC), remote user module (RUM), NETS maintenance and administrative center (NMAC), and access security device (ASD). In addition, this effort provides for the completion and documentation of the following: technical analysis and cost estimate for the engineering of switch-internal modules (SIMS) in the 4ESS and 5ESS switches for implementation in the AT&T portion of the public switch network (PSN), NETS design tools, and NETS engineering studies related to AT&T proprietary areas.

System specifications provide an overview of NETS by identifying and defining required PSN and NETS elements and their roles. These specifications also state performance objectives and document functions and features required for NETS. All interfaces and switches are identified and described to complete system documentation.

NETS elements specifications provide detailed function and performance specifications for each of the following major elements: CC, RUM, NMAC, and ASD.

Core functions and features are to be expanded to include the following features: privilege, next call, and forwarding directory. Detailed specifications are to be developed and documented for these features.

SIMS study is included as a possible enhancement to accessing NETS and providing priority treatment to national security/emergency preparedness (NS/EP) users.

Requirement exists to bundle already developed NETS design tools, to include data bases, into a production type quality package to provide an orderly approach to designing and evaluating designs for the network.

Studies are to be conducted to refine network design, investigate adaptive routing and traffic controls, analyze network management techniques, document expanded signaling capabilities to improve survivability, evaluate several access security approaches, investigate integrating NETS with other systems, and analyze benefits to NETS from employing a more robust routing schematic.

Enclosure 1 to Enclosure 1

Comments from Defense Information Systems Agency (continued)

OBJECTIVE: Specifications are to be of sufficient detail to allow a manufacturer of switching system equipment to proceed with a detailed design of NETS unique system elements and a systems integrator to acquire, install and implement requisite NETS service.

Comments from Defense Information Systems Agency (continued)

PURCHASE REQUEST NUMBER: DNMR90033

ACQUISITION TITLE: NETS Access Security Device (ASD)

CONTRACTOR: NSA

REQUIREMENT: Develop an operational access security device (ASD) for the purpose of demonstrating the NETS access security architecture. Development of operational ASD will be accomplished by upgrading two preliminary ASDs to an operational level. Corresponding emulation software will be developed by NSA by modifying existing software code to address specific NETS security elements to include automatic call controllers which represent the heart of the system. NSA will also prepare all necessary documentation for the ASD and software.

OBJECTIVE: Demonstration will illustrate technical feasibility of developing security architecture and will mitigate risk in proceeding with NETS. Demonstration will also prove to the user community that security architecture can be designed in a user friendly manner.

Comments from Defense Information Systems Agency (continued)

PURCHASE REQUEST NUMBER: QMCS-88-0034

DISA CONTRACT NUMBER:

ACQUISITION TITLE: Local Exchange Carrier Support to NETS

CONTRACTOR: Martin Marietta Corporation (MMC)

REQUIREMENT: The SOW requires the contractor to perform an analysis of the Regional Bell Operating Companies (RBOCs), GTE, Local Exchange Carriers (LECs), and Centel - including telecommunication resources currently in place and those expected to be implemented in the 90's - for satisfying NS/EP requirements on an intra- and inter- LATA basis.

The "intent of the SOW is to obtain detailed information on the LEC networks in support of the NETS implementation"

The contractor will examine ways in which NS/EP telecommunications services and NETS can be improved by use of RBOC and Centel public switched and corporate communications network resources. There were three task areas:

1. Expanded route selection for NS/EP traffic
2. Survivable Signalling for NS/EP traffic
3. Priority treatment for NS/EP traffic

Task area 1 called for developing a plan or routing description and recommending routing changes and physical routing diversity. The contractor was to evaluate current and projected networks to provide the government with an understanding of, and training with routing design philosophies.

Task area 2 was to acquire the LECs transition/implementation survivable signalling plans, and to identify and analyze the plans for vulnerabilities. The contractor was to identify implementation alternatives and provide cost estimates. In addition they were to identify vulnerabilities to terrorism, sabotage, natural and man-made disasters and nuclear war that may impact NS/EP call survivability.

Task 3 involved analyzing the Local Exchange Carriers (LECs) for the provisioning of NS/EP priority treatment required for the NETS program. The contractor was to identify current and emerging capabilities that can be provided within the LEC networks using available technology. The contractor was to propose methods to achieve necessary implementation of additional priority treatment capabilities in the LECs.

OBJECTIVE: Obtain a detailed understanding of RBOC and Centel networks in support of NETS implementation.

Comments from Defense Information Systems Agency (continued)

PURCHASE REQUEST NUMBER: QNCS-87-013

ACQUISITION TITLE: MCI Support to NETS

CONTRACTOR: MCI

REQUIREMENT: The purpose of this effort was to "examine current MCI resources to determine how the network could best be utilized to carry NS/EP traffic in an emergency, including emergencies such as war"

The contractor was to examine the capabilities already planned for implementation in the MCI network, propose network enhancements, determine performance specifications and cost estimates for MCI services to support NETS.

The contractor's analysis of existing MCI capabilities would tell the government how existing network assets could be utilized for NS/EP traffic. The contractor was to examine and propose alternative means to identify NS/EP traffic from normal PSN traffic; assess the vulnerabilities of MCI's network signalling system; and generate or obtain databases of their own switching and transmission facilities and routing information.

OBJECTIVE: Provide cost effective enhancements to NETS by incorporating the resources of the major carriers. Specifically, study MCI's resources to determine the feasibility of including MCI's resources into the NETS architecture.

Comments from Defense Information Systems Agency (continued)

PURCHASE REQUEST NUMBER: QNCS-87-014

ACQUISITION TITLE: US SPRINT Support to NETS

CONTRACTOR: US SPRINT

REQUIREMENT: The contractor is to analyze Sprint's capabilities to satisfy NS/EP telecommunications requirements within existing network capabilities.

Sprint will examine their own network and propose means to identify NS/EP traffic from normal PSN traffic; examine expanded route capabilities and how to get priority treatment for NS/EP traffic; assess vulnerabilities of the Sprint network, and deliver databases of their switching and transmission facilities.

OBJECTIVE: Provide cost effective enhancements to NETS by incorporating the resources of the major carriers. Specifically, study SPRINT's resources to determine the feasibility of integrating these resources into the NETS architecture.

Comments from Defense Information Systems Agency (continued)

PURCHASE REQUEST NUMBER: QNCS-88-025

ACQUISITION TITLE: AT&T - Robust Non-Hierarchical Routing (RNHR)

CONTRACTOR: AT&T

REQUIREMENT: RNHR was to be a tariffed service and this contract effort provided for operational demonstrations.

RNHR is an adaption of a commercial routing algorithm, DNHR, currently employed in the AT&T network. RNHR does not change the physical network. It updates routing tables making use of trunks and switches that survive major damage from man-made and natural disasters.

Phase I identifies survivable routes for NS/EP traffic, and identifies efforts needed to implement RNHR, and provides for operational demonstrations of the capability and finally inserts software modifications into the network; Phase II is the actual implementation of RNHR and Phase III is operations and maintenance of the tariffed service.

OBJECTIVE: Provide increased survivability within the PSN for NS/EP traffic through the use of the RNHR concept.

Comments from Defense Information Systems Agency (continued)

PURCHASE REQUEST NUMBERS: DNMR00010 AND DNMR00065

ACQUISITION TITLE: MITRE Support to NETS

CONTRACTOR: MITRE

REQUIREMENT: MITRE provides technical and system engineering support to the NCS in numerous areas including NETS. These particular task statements called for MITRE support to the evaluation of the NETS System Integration contract proposals effort and for the evaluation of other NETS contract deliverables. In addition MITRE is required to provide system engineering and technical review support, participate in government reviews with industry and participate as required in the source selection evaluation effort. In a separate tasking MITRE provided system planning, analysis and support for continuing engineering and integration of the 3 NLP programs, and technical analysis relating to the integration of the NETS capabilities into DSN and FTS.

OBJECTIVE: Provide requisite technical expertise and objectivity for implementation of NETS.

Comments from Defense Information Systems Agency (continued)



OFFICE OF THE COMPTROLLER OF THE DEPARTMENT OF DEFENSE

WASHINGTON, DC 20301-1100

AUG 29 '99

(Program/Budget)

MEMORANDUM FOR DIRECTOR, READINESS AND OPERATIONAL SUPPORT
DIRECTORATE, DOD INSPECTOR GENERAL

SUBJECT: Draft Audit report on the Funding of the Nationwide
Emergency Telecommunications Service (NETS) (Project
No. ORD-5016.01)

The DoD IG recommendation in the subject report raises the issue of appropriation cognizance, therefore, I took the liberty to review the circumstances behind the report's findings. The report recommends that RDT&E funding be used in lieu of O&M funding to finance the "up-front development costs" within the NETS contracts.

My review of the NETS contracts results in a less definitive conclusion than the one expressed in the audit report. Which appropriation is used to finance the NETS contracts is a subjective judgment and I do not concur that a clear violation of the DoD Budget Guidance Manual exists.

In my judgment, the NETS contracts, while including system improvement efforts, are fundamentally telecommunications services contracts, therefore, DISA's decision to use O&M funding is a reasonable interpretation of the Budget Guidance Manual. The issue becomes largely a semantic difference over whether the software and hardware modifications within the NETS contracts meet the definition of "major" improvements. The audit report recommendation seems to be concerned that using O&M funding misrepresents the nature of the NETS efforts. DISA has not to my knowledge misrepresented the details concerning these contracts during any budget review and has consistently budgeted the NETS contract with O&M funds based on a determination that the NETS efforts do not expand the current state of technology. This judgment has been coordinated with the Operations Directorate.

DoD Comptroller staff points of contact for DISA programs are Tom Smith, Operations Directorate, (x79317), and Jan Hope, Investment Directorate (x71445).

A handwritten signature in dark ink, appearing to read "Ronald G. Garant".

Ronald G. Garant
Director for Investment
DoD Comptroller

Enclosure 2

Comments from the Office of the Comptroller of the Department of Defense



OFFICE OF THE COMPTROLLER OF THE DEPARTMENT OF DEFENSE

WASHINGTON, DC 20301-1100

46 29 9

(Program/Budget)

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Ronald G. Garant
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